Reply to 2nd referee report:

The referee is correct to point out the limitation in our original model that capital is the only input, and his comments on innovation and labor management are suggestive. We have since added a theorem with labor as the single input, which is interpretable by a simulation example.

There are a few reasons behind our choice of a simple model setup:

- 1. Our simple model is not completely non-realistic: while some production processes use both labor and capital as inputs, they may use a fixed proportion combination of these two factors when these two inputs are perfect compliments. In mathematical form, the production function looks like $q = \min\{aL, bK\}$ with a and b being constants. In this case we may regard b units of labor and a units of capital combined together as 1 unit of some composite input C, then the production function can be transformed into q = (ab)C, which becomes a single input production function. (Of course to maintain the same level of simplicity here we assume labor supply is always sufficient to match the capital input, and that workers always agree to supply labor at a fixed wage rate.)
- 2. Our result remains true if we modify our model to include labor as the single input and with workers' preference containing the labor/leisure trade off, as stated in the revised version attached here (refer to Theorem 2 (page 19) and example 2 (page 24)).
- 3. What we are not certain is whether our theoretical result remains true in the general case, i.e., the general production function with independent labor and capital inputs. The mathematical arguments would be much more complicated for this general case, although we believe similar conclusion might still be established. This can be our future research extension.
- 4. Finally, the main objective of our paper is not to argue that monopoly innovation *always* leads to welfare improvement, instead we want to establish the result that monopoly innovation *does not always* lead to welfare loss. For such a moderate theoretical result, we think a simple model with labor as the single input (as revised accordingly in the revised version attached), is sufficiently convincing.